

JUL 10 2006

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**stryker**  
**Howmedica**  
**OSTEONICS**

325 Corporate Drive  
Mahwah, NJ USA 07430

**510(k) Summary of Safety and Effectiveness for the  
Solar® PureFix® HA Shoulder**

Proprietary Name: Solar® PureFix® HA Shoulder Humeral Stem

Common Name: Shoulder Prosthesis

Classification Name and Reference  
Shoulder joint humeral (hemi-shoulder)  
metallic uncemented prosthesis  
21 CFR §888.3690

Shoulder joint metal/polymer semi-constrained cemented prosthesis  
21 CFR §888.3660

Regulatory Class: Class II

Device Product Code:  
87 HSD - prosthesis, shoulder, hemi-,  
humeral, metallic uncemented,

87 KWS - prosthesis, shoulder, semi-constrained, metal/polymer cemented

For Information contact:  
Tiffani Rogers  
Regulatory Affairs Specialist  
Stryker Orthopaedics  
325 Corporate Drive  
Mahwah, New Jersey 07430  
Phone: (201) 831-5612  
Fax: (201) 831-6038  
E-Mail: Tiffani.Rogers@stryker.com

Date Summary Prepared: June 13, 2006

## Device Description

The Solar® PureFix® HA Shoulder is a proximal humeral stem manufactured from titanium alloy. The proximal section of the stem is coated with commercially pure titanium (CP-Ti) and hydroxyapatite. The Solar® PureFix® HA Shoulder is available in 11 sizes with distal diameters ranging from 7mm to 17mm in 1mm increments. The Solar® PureFix® HA Shoulder features a taper that is compatible with the Solar® Shoulder lines of humeral heads currently marketed by Howmedica Osteonics.

## Intended Use:

The subject humeral stem is a single-use, sterile device intended for use in shoulder replacement. It is intended for the reconstruction of the proximal humerus. This humeral stem is intended for primary or revision reconstruction of the shoulder joint.

### Indications:

#### For use as a Bipolar Shoulder Replacement:

- Aseptic necrosis of the humeral head.
- Painful, disabling joint disease of the shoulder resulting from: Degenerative arthritis, rheumatoid arthritis or post-traumatic arthritis.
- Proximal humeral fracture and/or dislocation.
- Clinical management problems where arthrodesis or alternative reconstructive techniques are less likely to achieve satisfactory results.
- Pathological conditions or age considerations which indicate a more conservative glenoid procedure and avoidance of the use of bone cement in the glenoid.

#### For use as a Total Shoulder Replacement:

- Aseptic necrosis of the humeral head.
- Painful, disabling joint disease of the shoulder resulting from: Degenerative arthritis, rheumatoid arthritis or post-traumatic arthritis.
- Proximal humeral fracture and/or dislocation.
- Clinical management problems where arthrodesis or alternative reconstructive techniques are less likely to achieve satisfactory results.
- Revision of previous unsuccessful total shoulder replacement, resurfacing or other procedure.

## Substantial Equivalence:

The determination of the substantial equivalence of the Solar® PureFix® HA Shoulder is based on its similarities in indications for use, intended use, design and sterilization to the Solar® Shoulder (K955731, cleared March 05, 1996).



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

JUL 10 2006

Howmedica Osteonics Corp.  
c/o Ms. Tiffani Rogers  
Regulatory Affairs Specialist  
325 Corporate Drive  
Mahwah, New Jersey 07430

Re: K061677

Trade/Device Name: Solar® PureFix® HA Shoulder

Regulation Number: 21 CFR 888.3690

Regulation Name: Shoulder joint humeral (hemi-shoulder) metallic uncemented prosthesis

Regulatory Class: II

Product Code: HSD, KWS

Dated: June 13, 2006

Received: June 19, 2006

Dear Ms. Rogers:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally

marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Mark N. Melkerson  
Director  
Division of General, Restorative  
and Neurological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

K061677

Indications for Use

510(k) Number (if known): \_\_\_\_\_

Device Name: Solar® PureFix® HA Shoulder

**Indications**

For use as a Bipolar Shoulder Replacement:

- Aseptic necrosis of the humeral head.
- Painful, disabling joint disease of the shoulder resulting from: Degenerative arthritis, rheumatoid arthritis or post-traumatic arthritis.
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For use as a Total Shoulder Replacement:

- Aseptic necrosis of the humeral head.
- Painful, disabling joint disease of the shoulder resulting from: Degenerative arthritis, rheumatoid arthritis or post-traumatic arthritis.
- Proximal humeral fracture and/or dislocation.
- Clinical management problems where arthrodesis or alternative reconstructive techniques are less likely to achieve satisfactory results.
- Revision of previous unsuccessful total shoulder replacement, resurfacing or other procedure.

Prescription Use X OR Over-the-Counter Use \_\_\_\_\_  
(Per 21 CFR 801.109)

(PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON ANOTHER PAGE  
IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

Denise Meltzer  
(Division Sign-Off)

**Division of General, Restorative,  
and Neurological Devices**

510(k) Number K061677